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PTO/SB/18 (08-00)

Approved for use through 10/31/2002. OMB 0651-0032  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>UTILITY PATENT APPLICATION TRANSMITTAL</b>  <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>		<b>Attorney Docket No.</b> 282.032	
		<b>First Named Inventor</b> DAVID J. BEEBE ET AL	
		<b>Title</b> BIOCHEMICAL SIGNAL TRANSFER USING LIPOSOMES IN A CHANNEL OF A MICROFLUIDIC DEVICE	
		<b>Express Mail Label No.</b> EV313040236US	

<b>APPLICATION ELEMENTS</b>  <i>See MPEP chapter 600 concerning utility patent application contents.</i>	<b>ADDRESS TO:</b> Mail Stop - Box Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g., PTO/SB/17) <i>(Submit an original, and a duplicate for fee processing)</i> 2. <input checked="" type="checkbox"/> Applicant claims small entity status <i>See 37 CFR 1.27</i> 3. <input checked="" type="checkbox"/> Specification [Total Pages <u>17</u> ] <i>(preferred arrangement set forth below, MPEP 1503.01)</i> - Descriptive title of the invention - Cross Reference to Related Applications - Statement Regarding Fed sponsored R & D - Reference to sequence listing, a table, or computer program listing appendix - Background of the Invention - Brief Summary of the Invention - Brief Description of the Drawings (if filed) - Detailed Description - Claims - Abstract of the Disclosure 4. <input checked="" type="checkbox"/> Drawing(s) (35 U.S.C. 113) [Total Sheets <u>5</u> ] 5. <input type="checkbox"/> Oath or Declaration [Total Pages <u>    </u> ] a. <input type="checkbox"/> Newly executed (original or copy) b. <input type="checkbox"/> Copy from a prior application (37 CFR 1.63 (d)) <i>(for continuation/divisional with Box 16 completed)</i> i. <input type="checkbox"/> <b>DELETION OF INVENTOR(S)</b> Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63 (d)(2) and 1.33 (b). 6. <input type="checkbox"/> Application Data Sheet. See 37 CFR 1.76 7. <input type="checkbox"/> CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)	8. <input type="checkbox"/> Nucleotide and/or Amino Acid Sequence Submission <i>(if applicable, all necessary)</i> a. <input type="checkbox"/> Computer Readable Form (CRF) b. <input type="checkbox"/> Specification Sequence Listing on: i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or ii. <input type="checkbox"/> paper c. <input type="checkbox"/> Statement verifying identity of above copies <b>ACCOMPANYING APPLICATION PARTS</b> 9. <input type="checkbox"/> Assignment Papers (cover sheet & document(s)) 10. <input type="checkbox"/> 37 CFR 3.73(b) Statement <input type="checkbox"/> Power of Attorney <i>(when there is an assignee)</i> 11. <input type="checkbox"/> English Translation Document <i>(if applicable)</i> 12. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations 13. <input type="checkbox"/> Preliminary Amendment 14. <input checked="" type="checkbox"/> Return Receipt Postcard (MPEP 503) <i>(Should be specifically itemized)</i> 15. <input type="checkbox"/> Certified Copy of Priority Document(s) <i>(if foreign priority is claimed)</i> 16. <input type="checkbox"/> Request and Certification under 35 U.S.C. 122 (b)(2)(B)(i) – Applicant must attached form PTO/SB/35 or its equivalent 17. <input checked="" type="checkbox"/> Other: <u>Supplement to Transmittal Letter</u>
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**16. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:**


☐ Continuation      ☐ Divisional      ☐ Continuation-in-part (CIP)      of prior application No:          /         

Prior application information: Examiner                                  Group / Art Unit:                                 

**For CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

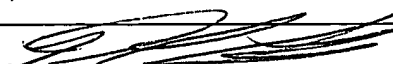
  

**17. CORRESPONDENCE ADDRESS**

<input type="checkbox"/> Customer Number or Bar Code Label	 <b>23598</b>	<input checked="" type="checkbox"/> Correspondence address below
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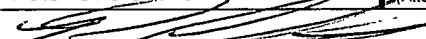
<b>Name</b>	Peter C. Stomma				
<b>Address</b>	BOYLE, FREDRICKSON, NEWHOLM, STEIN & GRATZ S.C.				
	250 E. Wisconsin Avenue, Suite 1030				
<b>City</b>	Milwaukee	<b>State</b>	WI	<b>Zip Code</b>	53202
<b>Country</b>	USA	<b>Telephone</b>	(414) 225-9755	<b>Fax</b>	(414) 225-9753

<b>Name (Print/Type)</b> Peter C. Stomma	<b>Registration No. (Attorney/Agent)</b> 36,020
<b>Signature</b> 	<b>Date</b> November 4, 2003

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Design, Washington, DC 20231.

{00049094.DOC /}

FEE TRANSMITTAL for FY 2003				Complete if Known			
Patent fees are subject to annual revision.				Application Number			
				Filing Date			
				First Named Inventor		David J. Beebe et al.	
				Examiner Name			
				Group Art Unit			
				Attorney Docket No.		282.032	
TOTAL AMOUNT OF PAYMENT				(\$ ) 448.00			
METHOD OF PAYMENT (check all that apply)				FEE CALCULATION (continued)			
<input checked="" type="checkbox"/> Check <input type="checkbox"/> Credit card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None  <input checked="" type="checkbox"/> Deposit Account Deposit Account Number: 50-1170 Deposit Account Name: Boyle, Fredrickson, Newholm, Stein & Gratz S.C.  The Commissioner is authorized to: (check all that apply) <input type="checkbox"/> Charge fee(s) indicated below <input checked="" type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input checked="" type="checkbox"/> Applicant Claims Small Entity Status See 37 CFR 1.27 <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.				3. ADDITIONAL FEES			
				Large Entity		Small Entity	
				Fee	Fee	Fee	Fee
				105	130	205	65
				Surcharge - late filing fee or oath			
				127	50	227	25
				Surcharge - late provisional filing fee or cover sheet			
				139	130	139	130
				Non-English specification			
				147	2,520	147	2,520
				For filing a request for <i>ex parte</i> reexamination			
				112	920*	112	920*
				Requesting publication of SIR prior to Examiner action			
				113	1,840*	113	1,840*
				Requesting publication of SIR after Examiner action			
				115	110	215	55
				Extension for reply within first month			
				116	400	216	200
				Extension for reply within second month			
				117	920	217	460
				Extension for reply within third month			
				118	1,440	218	720
				Extension for reply within fourth month			
				128	1,960	228	980
				Extension for reply within fifth month			
				119	320	219	160
				Notice of Appeal			
				120	320	220	160
				Filing a brief in support of an appeal			
				121	280	221	140
				Request for oral hearing			
				138	1,510	138	1,510
				Petition to institute a public use proceeding			
				140	110	240	55
				Petition to revive - unavoidable			
				141	1,280	241	640
				Petition to revive - unintentional			
				142	1,280	242	640
				Utility issue fee (or reissue)			
				143	460	243	230
				Design issue fee			
				144	620	244	310
				Plant issue fee			
				122	130	122	130
				Petitions to the Commissioner			
				123	50	123	50
				Processing fee under 37 CFR 1.17(q)			
				126	180	126	180
				Submission of Information Disclosure Stmt			
				581	40	581	40
				Recording each patent assignment per property (times number of properties)			
				146	740	246	370
				Filing a submission after final rejection (37 CFR § 1.129(a))			
				149	740	249	370
				For each additional invention to be examined (37 CFR § 1.129(b))			
				179	740	279	370
				Request for Continued Examination (RCE)			
				169	900	169	900
				Request for expedited examination of a design application			
				Other fee (specify) _____			
				SUBTOTAL (3)		(\$ )	
*Reduced by Basic Filing Fee Paid							
SUBMITTED BY				Complete (if applicable)			
Name (Print/Type)		Peter C. Stomma		Registration No. (Attorney/Agent)		36,020	
Telephone		(414) 225-9755		Date		November 4, 2003	
Signature							

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INTELLECTUAL PROPERTY LAW

PETER C. STOMMA  
DIRECT DIAL: 414-225-1673  
PCS@BOYLEFRED.COM

November 4, 2003

Mail Stop - Box Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Re: Utility Patent Application  
Inventor(s): David J. Beebe et al.  
Title: *Biochemical Signal Transfer Using Liposomes In A  
Channel Of A Microfluidic Device*  
**USPTO Customer Account No.: 23598**  
Attorney Docket No.: 282.032

Dear Sir:

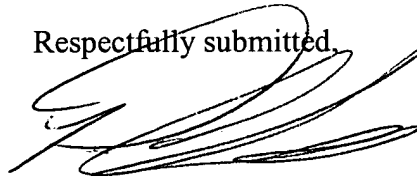
Enclosed is our check in the amount of **\$448.00** in payment of the government filing fee for the enclosed United States patent application, which application includes **10** pages of specification, **27** claims on **6** sheets, **4** Drawings on **5** sheets, and an Abstract of the Disclosure. A Utility Patent Application Transmittal and Fee Transmittal Form PTO/SB/17 (11/00) together with the filing fee are also enclosed. The Declaration and Power of Attorney is not included with the application and will be submitted at a later date.

Applicant is a small entity within the meaning of 37 CFR §§ 1.9 and 1.27 and hereby claims small entity status. The application has Federal Funding No. DOD ARPA F30602-00-2-0570.

Mail Stop - Box Patent Application  
Commissioner for Patents  
November 4, 2003  
Page 2

The Director is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1170.

Respectfully submitted,



Peter C. Stomma  
Registration No. 36,020

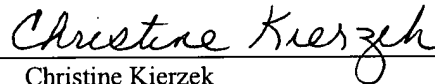
Customer Account - 23598

Certification Under 37 CFR 1.10

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Date of Deposit: **November 4, 2003**

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Christine Kierzek

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application Of: )  
)  
DAVID J. BEEBE ET AL. )  
)  
Filed Herewith )  
)  
BIOCHEMICAL SIGNAL TRANSFER )  
USING LIPOSOMES IN A CHANNEL )  
OF A MICROFLUIDIC DEVICE )

**SUPPLEMENT TO TRANSMITTAL LETTER**

Mail Stop - Box Patent Application  
Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This application is being filed pursuant to 37 CFR 1.53(b) and (d). The application includes the specification, at least one claim, the drawings, and the filing fee. The inventors are:

David J. Beebe  
4647 Tonyawatha Trail  
Monona, WI 53716

Jung-Hwa Aura Gimm  
1631 Jefferson Street, #2  
Madison, WI 53711

and

Arnold E. Ruoho  
1209 Brookwood Street  
Madison, WI 53711

Jeffrey S. Moore  
807 Vista Drive  
Savoy, IL 61874

The oath or declaration of the applicants is not included. The declaration will be forwarded promptly upon notification from the U.S. Patent and Trademark Office.

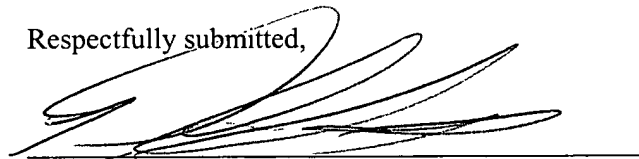
Please address all correspondence to:

**PETER C. STOMMA**  
BOYLE, FREDRICKSON, NEWHOLM, STEIN & GRATZ, S.C.  
250 East Wisconsin Avenue, Suite 1030  
Milwaukee, Wisconsin 53202

Please address all telephone calls to:

**PETER C. STOMMA**  
Phone No.: (414) 225-9755

Respectfully submitted,



Peter C. Stomma, Reg. No. 36,020

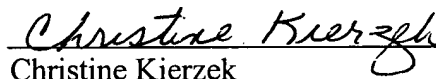
Boyle, Fredrickson, Newholm, Stein & Gratz, S.C.  
250 East Wisconsin Avenue, Suite 1030  
Milwaukee, WI 53202  
(414) 225-9755  
Attorney Docket No: 282.032

## **C rtification Under 37 CFR 1.10**

**Express Mail Label No:** EV313040236US

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Christine Kierzek